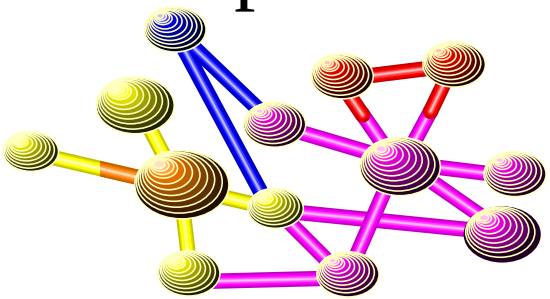
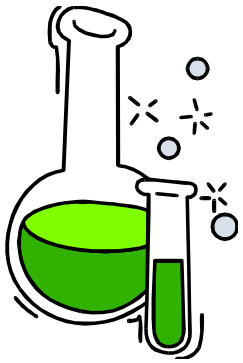
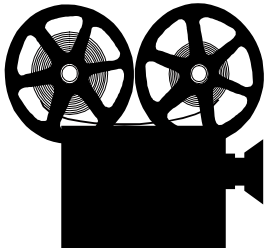
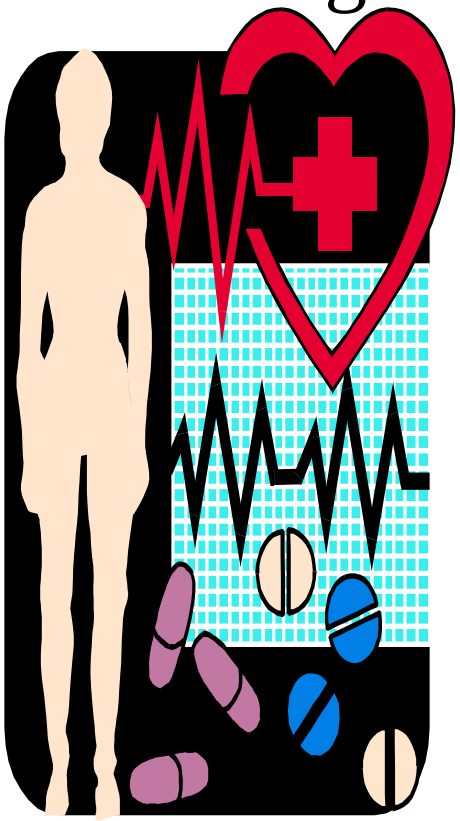
Offline Processing Areas Orientation Briefing

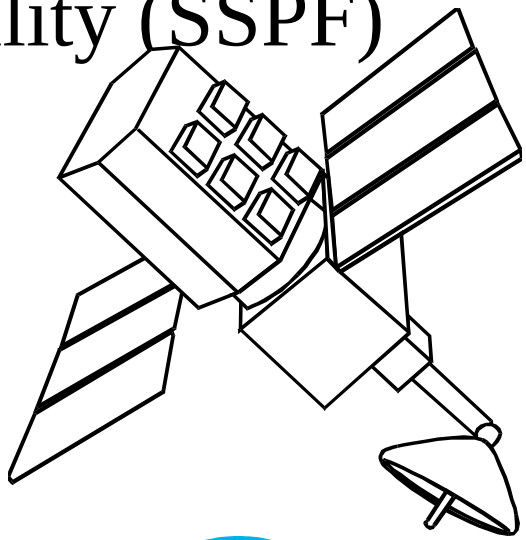
Operations and Checkout Building (O&C) and Space Station Processing Facility (SSPF)











Offline Processing Areas Orientation Briefing Agenda

Offline Processing Areas Orientation Briefing Agenda

Offline Processing Areas Orientation Briefing Objectives

- To introduce the payload customers to the Offline Processing Areas (OPA) Facilities at the Operations and Checkout Facility (O&C) and / or the Space Station Processing Facility (SSPF) at Kennedy Space Center (KSC)
- To introduce the payload customers to the main points of contact for facility mission operations
- To communicate personnel and equipment safety, such as fire alarms and hazardous operations or commodities in the vicinity
- To communicate Boeing's and NASA's responsibilities and services to the customer
- To establish the customer's responsibilities

Offline Processing Areas Orientation Briefing
Boeing's Responsibilities

Develop and implement pre-flight and post-flight processing activities including:

- **Payload requirements management**
  - Provide Offline Processing Areas, equipment, supplies and general services requested by the customer as recorded in the Program Requirements Document (PRD)
- **Facility and equipment support**
  - Configure Offline Processing Areas for simulation, pre-flight, in-flight and post-flight operations
  - Coordinate facility maintenance (including power and temperature control)
- **General logistics**
  - Coordinate personnel access
  - Coordinate equipment and supply shipping
  - Coordinate activities for unpacking and loading large equipment

Offline Processing Areas Orientation Briefing
NASA's Responsibilities

Develop and implement pre-flight and post-flight processing activities including:

- **Payload requirements management**
  - Provide Offline Processing Areas, equipment, supplies and general services requested by the customer as recorded in the PRD
- **Support**
  - Provide office space and equipment for customers involved in pre-flight, in flight and post flight mission processing as requested in the PRD
- **General logistics**
  - Coordinate personnel access
  - Coordinate equipment and supply shipping
  - Coordinate activities for unpacking and loading large equipment

Offline Processing Areas Orientation Briefing
Customer's Responsibilities

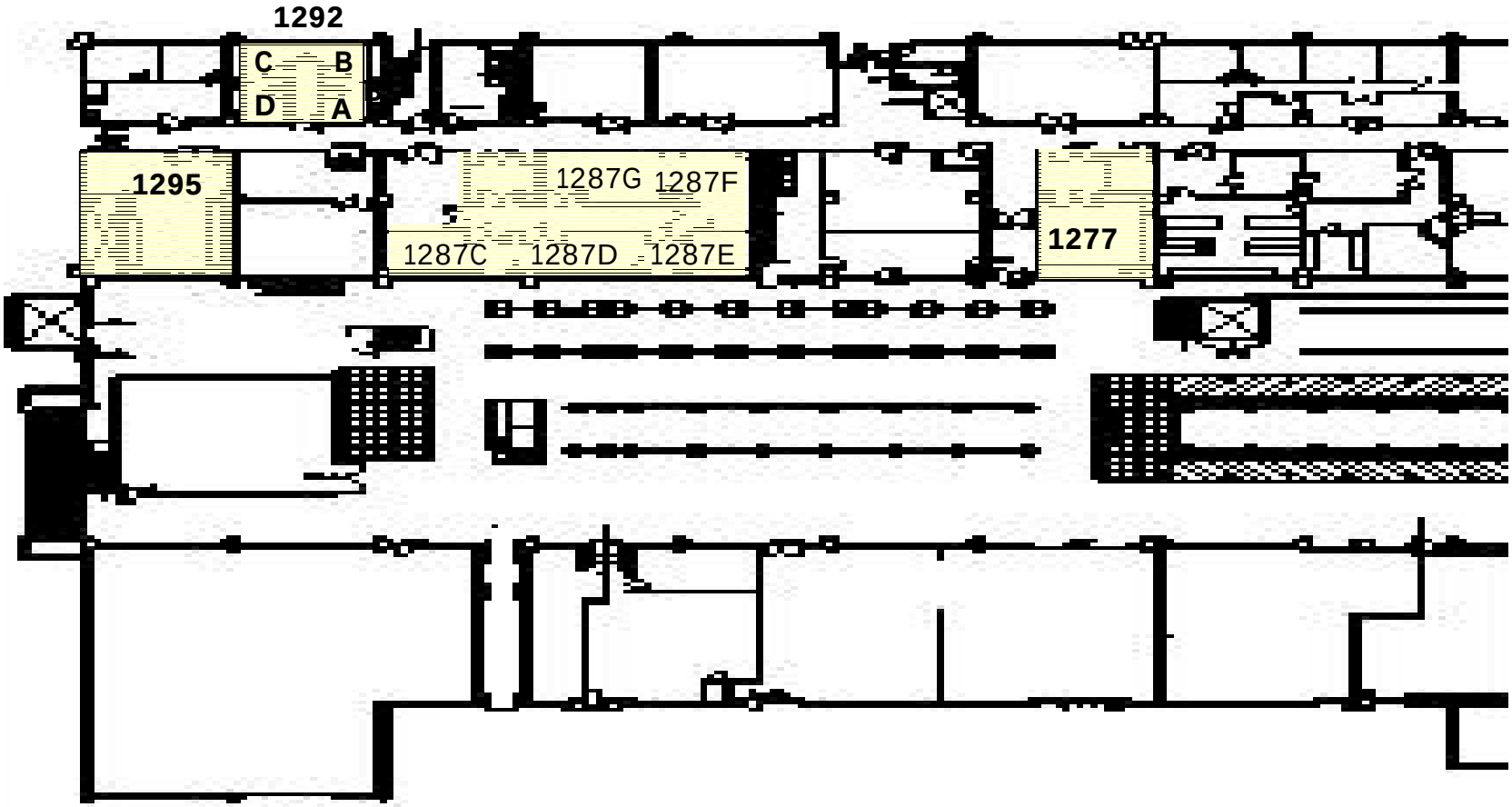
- **Submit payload requirements**
  - Request Offline Processing Areas, equipment, supplies, and general services through the Launch Site Support Plan (LSSP) including dates required and associated hazards
  - Submit special requirements (e.g., power, temperature control, biomedical, radioactive and/or chemical waste disposal, special shipping/receiving, etc.)
- **Submit schedules and personnel access list**
  - Provide facility and equipment utilization schedules for simulation, mission and pre-flight, in-flight, and post-flight operations
  - Provide list of authorized personnel for Offline Processing Areas access
- **Offline Processing Area configuration**
  - Unpack and setup customer owned equipment supplies, chemicals and other items shipped to OLL
- **Offline Processing Area de-configuration**
  - Return Offline Processing Areas to original configuration and pack customer owned equipment

Offline Processing Areas Orientation Briefing
Personnel Interfaces

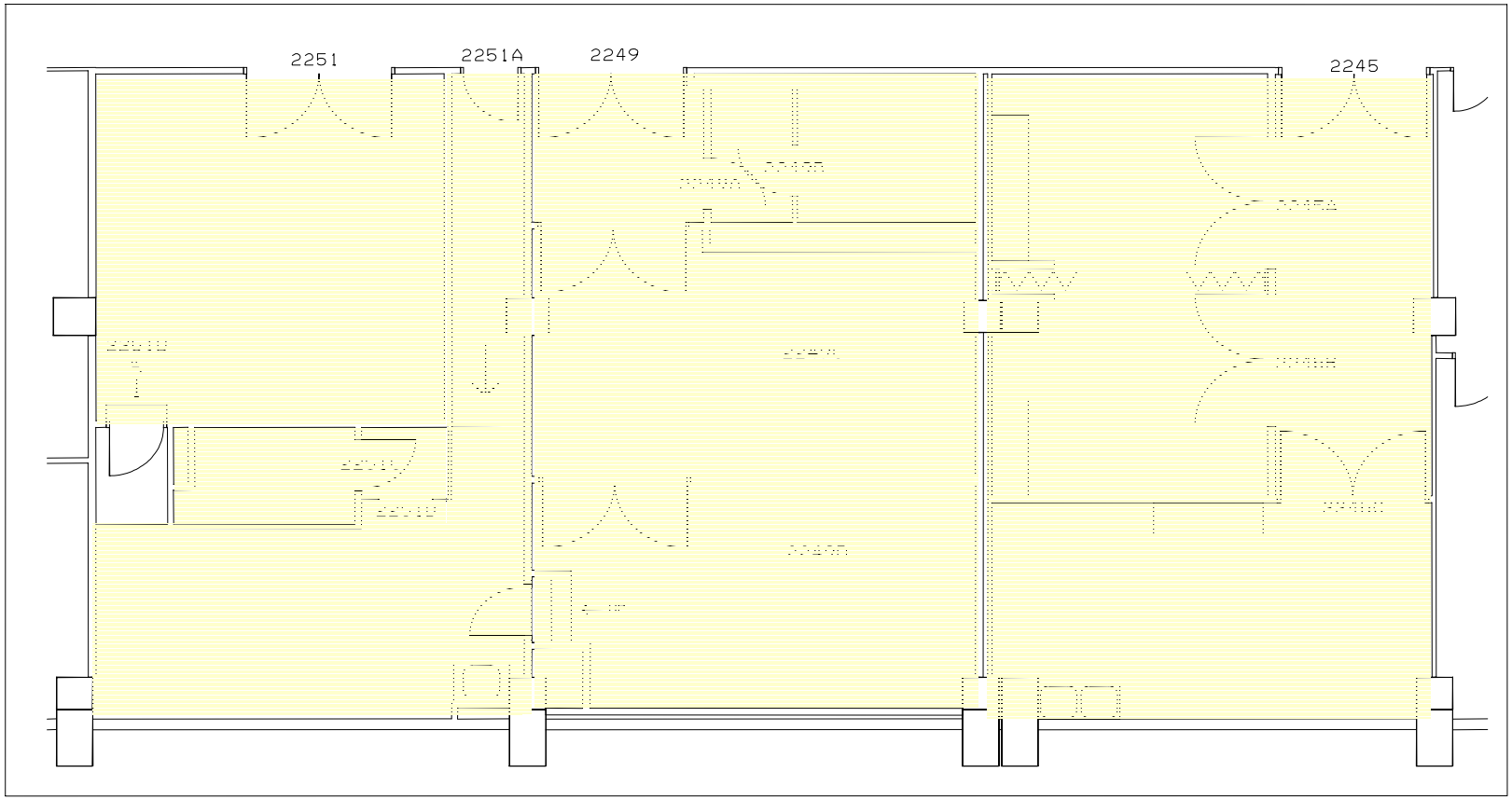
• Customer Processing Support Manager	• Lisa Brawn, NASA • Patti Skipper, NASA
• Customer Integration Manager	• Jack Keifenheim Amy Asato Bob Sturm Welmon Speed Joann Archer
• NASA Quality	• Jim Reed
• Offline Processing Area Manager	• Cindy Ward
• Science and Experiment Management	• Guy Etheridge Mimi Shao

Offline Processing Areas Orientation Briefing

Facility Layout - O&C 1st Floor



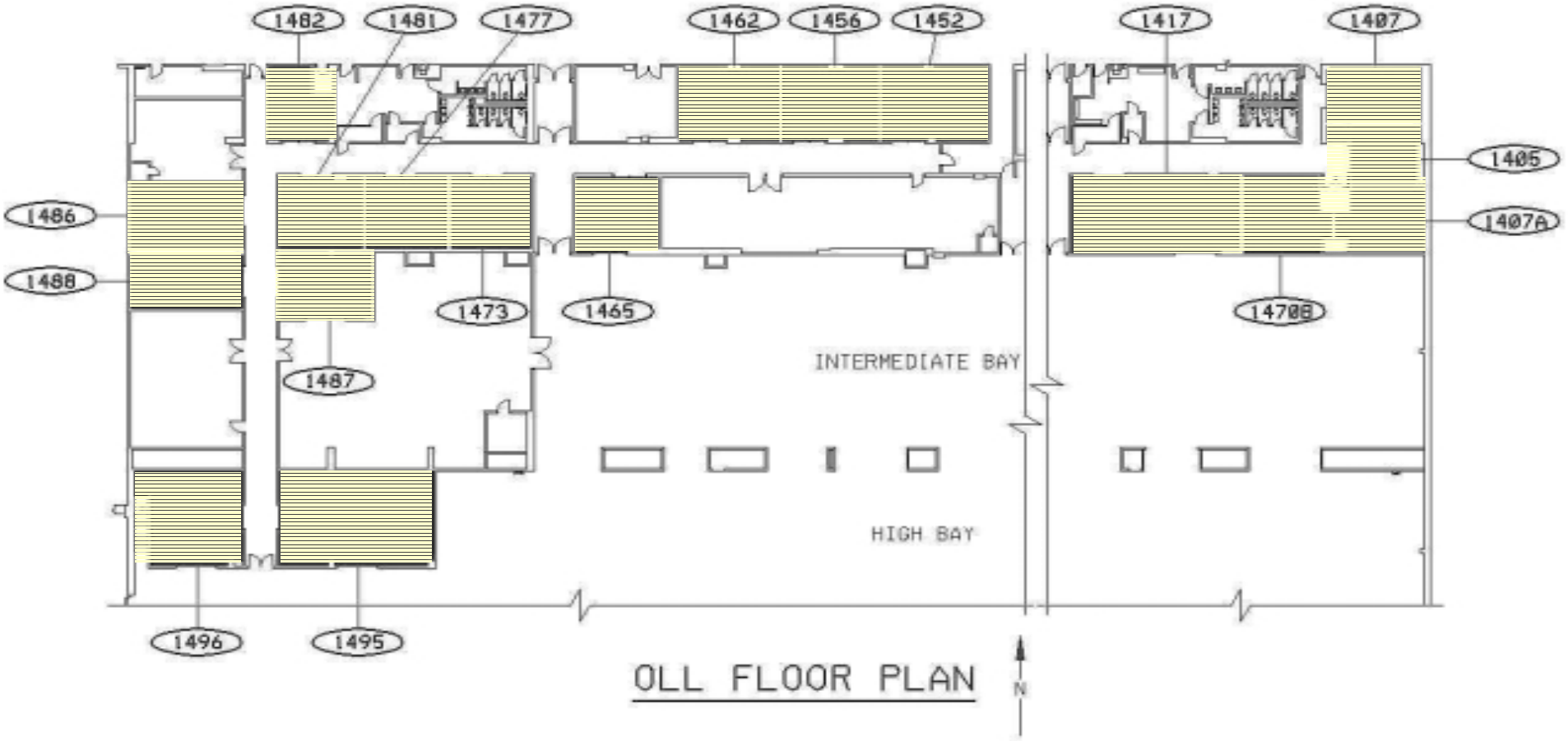
Offline Processing Areas Orientation Briefing
Facility Layout - O&C 2nd Floor



Offline Processing Areas Orientation Briefing
Chemical Offline Processing Area- O&C

Offline Processing Areas Orientation Briefing
Typical Processing Area- O&C

Offline Processing Areas Orientation Briefing
Facility Layout - SSPF



Offline Processing Areas Orientation Briefing
Chemical Processing Area- SSPF

Typical Processing Area- SSPF

Offline Processing Areas Orientation Briefing

Facilities Access and Security - General

- Badge must be displayed for guard at entrance gate upon entering Kennedy Space Center (KSC) and Cape Canaveral Air Station (CCAS). Personnel with a temporary badge may be requested to present a form of picture ID.
- Badge must be displayed above the waist unless otherwise designated.
- You and your vehicle are subject to search at any time while on KSC or CCAS premises.
- All State of Florida motor vehicle regulations must be followed while operating a motor vehicle on KSC or CCAS. **Seatbelts must be worn at all times.**
- **No firearms, illegal drugs or alcohol (including empty containers) are permitted at any time.**
- No eating, drinking or smoking in the Offline Processing Areas.
- Facility Offline Processing Areas are open 24 hours a day, 7 days a week, 365 days a year.
- Offline Processing Areas in the O&C and the SSPF will be assigned new cipher codes for each mission.

Offline Processing Areas Orientation Briefing
Facilities Access and Security - O&C

High Bay Access

- High bay access is controlled by security monitors and by Personnel Access Control Accountability System (PACAS) card readers.

- Only personnel designated by the Payload Mission Manager and who are properly badged will be allowed in the high bay area.

Offline Processing Area Access

- Access to Offline Processing Area requires cipher code which will be distributed per Payload Mission Management or Customer Processing Support Manager (CPSM).

- Operating hours are set by payload personnel utilizing the Offline Processing Areas.

Note: Personnel must evacuate the facility and the Offline Processing Area when they hear the fire alarm.

Offline Processing Areas Orientation Briefing
Facilities Access and Security - SSPF

High Bay Access

- High bay access is controlled by security monitors and by PACAS card readers.
- Only personnel designated by the Payload Mission Manager and who are properly badged will be allowed in the high bay area.

Offline Processing Area Access

- Access to Offline Processing Area requires cipher code which will be distributed per Payload Mission Management or Customer Processing Support Manager (CPSM).
- Operating hours are set by payload personnel utilizing the Offline Processing Area.

Note: Anhydrous ammonia may be present in the facility. Personnel must evacuate the facility and the Offline Processing Area when they hear the fire alarm

Offline Processing Areas Orientation Briefing
Facilities Access and Security - Customer Transient Office Space

- A facility cipher code will be assigned for each office area.

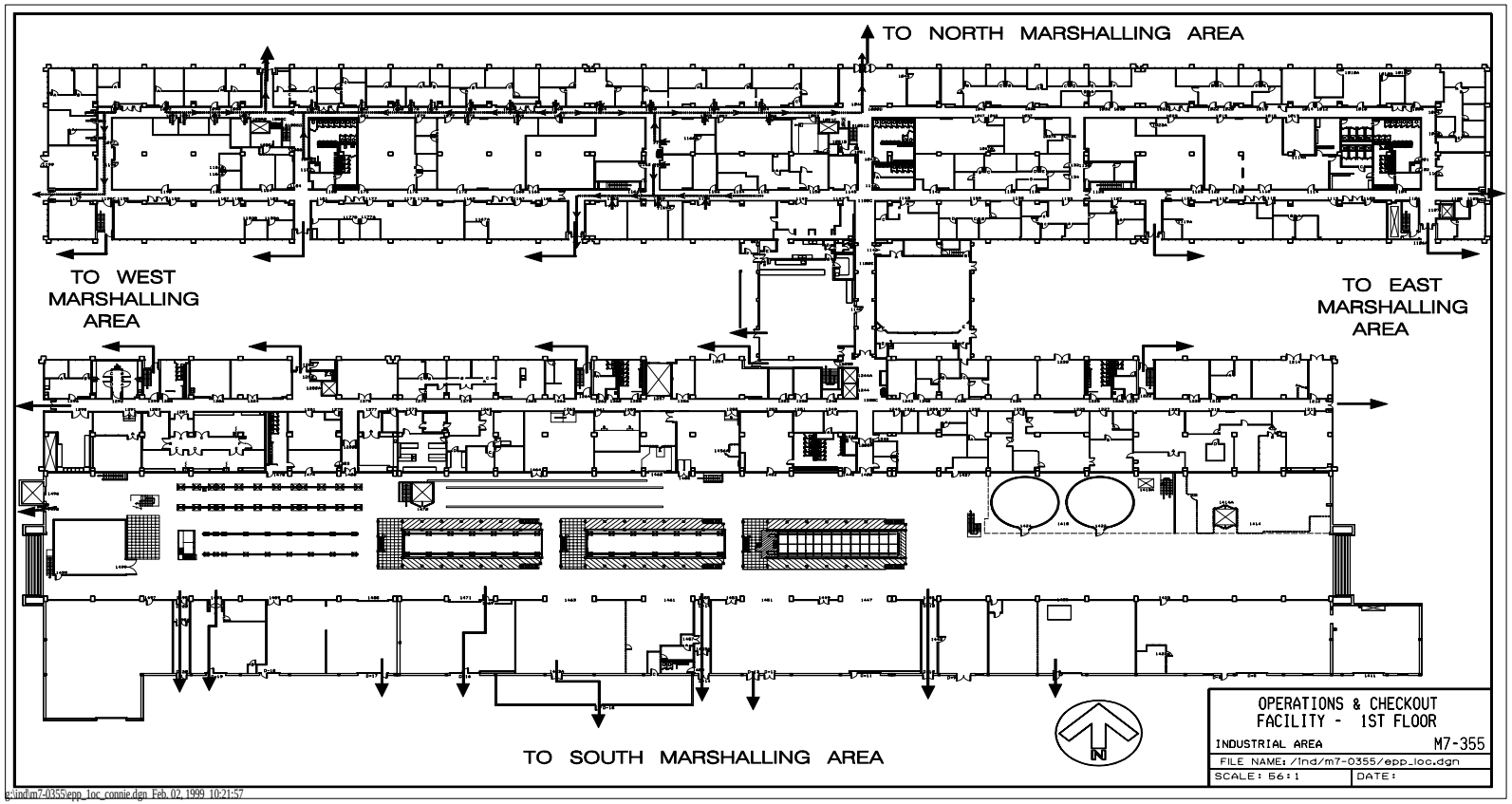
- Operating hours are set by the payload personnel utilizing the office space.

- Daily Closing Procedures (to be completed by the last person to leave the office area each night):
  - Turn off coffeemaker (fire hazard)
  - Turn off copy machine (overheating)
  - Turn off all lights
  - Lock all doors

Offline Processing Areas Orientation Briefing

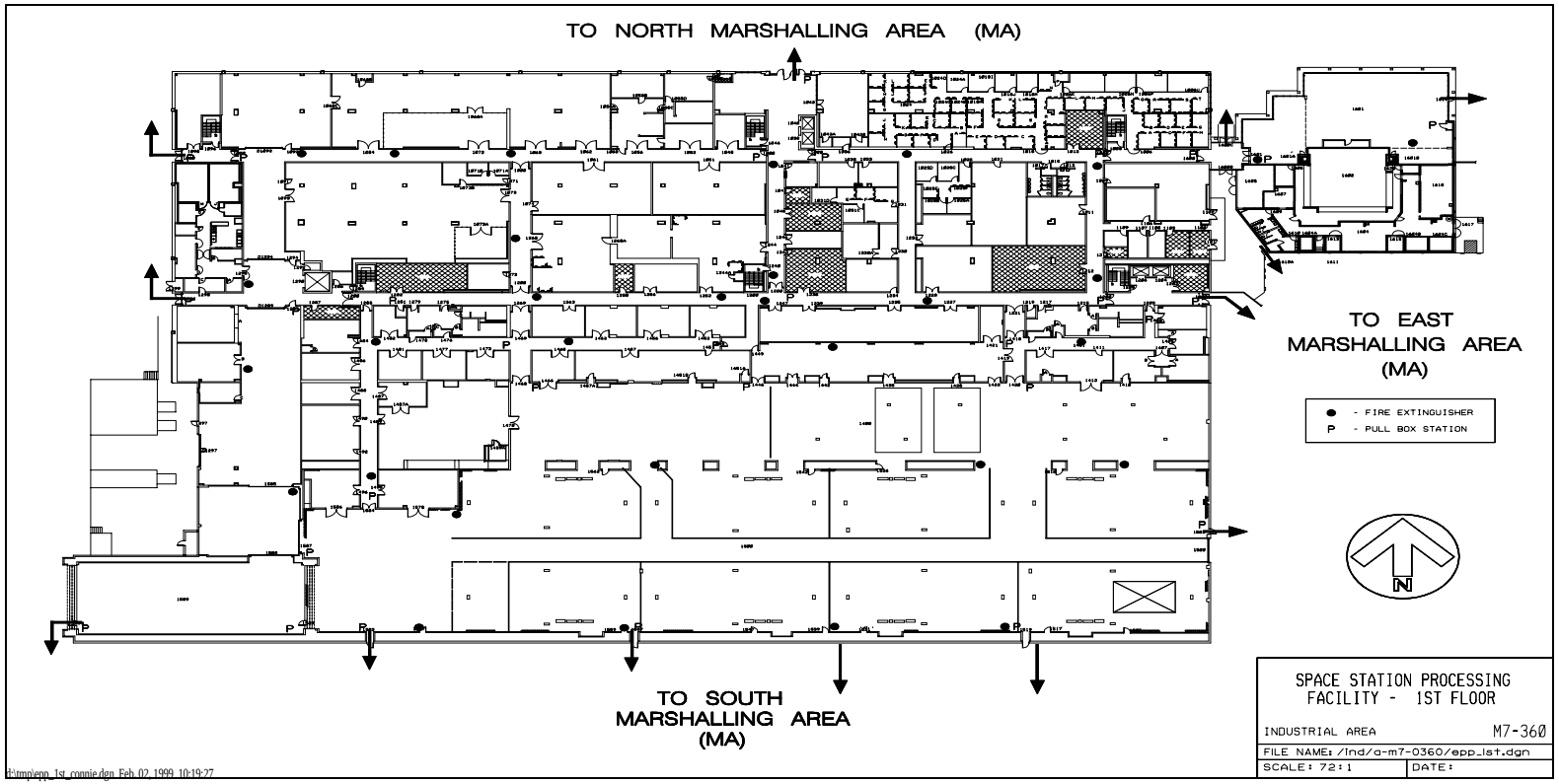
O&C Emergency Egress Routes

Marshalling Areas are located 75 ft from the Building in the Parking Lot Areas



Offline Processing Areas Orientation Briefing
SSPF Emergency Egress Routes

Marshalling Areas are located 75 ft from the Building in the Parking Lot Areas



Offline Processing Areas Orientation Briefing
O&C and SSPF Emergency Evacuation - Office Areas

- Payload Customer to appoint person to account for evacuated personnel
- Proceed to front of building
- Be alert for fire response vehicles

Offline Processing Areas Orientation Briefing
Offline Processing Area Safety - General

- Payload customers should familiarize themselves with the location of all safety items in their work area:
  - Safety glasses and other personal protective equipment
  - Eyewash /safety shower
  - Fire extinguisher
  - Emergency egress routes and emergency phone numbers
  - Sharps and other waste containers

- When using biological safety cabinets equipped with an ultraviolet light source, appropriate safety measures should be used (e.g., donning safety glasses in the work area; turning the light off when not in use).

- Chemical Fume Hoods will require vent emission utilization logs to be completed each time the unit is used. (See page 28)

Offline Processing Areas Orientation Briefing

Offline Processing Area Safety - General (cont'd)

- Hazardous and flammable substances should be stored in the designated storage containers (POL - portable oil locker)
  - All products will be clearly marked using the English language with the following:
    - Product Identity
    - Manufacturer's Name, Address and/or Phone Number
    - Appropriate Hazard Warnings
    - Hazardous Materials Identification System (HMIS Label)
  - Material Safety Data Sheets (MSDS) should be readily available in the Offline Processing Area.
  - A clear path must be maintained to the POL.

- Contact the OPAM or the CPSM for any safety questions or concerns.

Offline Processing Areas Orientation Briefing
Waste Disposal Procedures (O&C and SSPF)

- Payload customers are required to label Processing Area all generated waste as appropriate:
  - Place Label on Boeing-provided container or bag
  - Indicate contents and describe mixture components
  - Indicate quantity
  - Indicate concentration
  - Indicate payload or mission
  - Indicate user/generator name

- Biomedical waste bags and boxes must be labeled and should be sealed when full. Any sharp items should be placed in a sharps container and have completed labels attached.

- Payload customer will sort waste and place dry non-hazardous waste in the Satellite Accumulation Area (SAA) cans provided and notify OPAM.

- Boeing will coordinate chemical disposition for each payload. Requirements for disposal are based on information provided to NASA Safety on the Process Waste Questionnaire (PWQ).

Offline Processing Areas Orientation Briefing
Biomedical Waste Container Label

Biomedical Waste Container Label

IDENTIFICATION

DATE STARTED:_____
DATED LOGGED IN:_____

Experiment Name:_____
PI Name:_____
Room (OPA Room number):_____Building: _____

PIPETS MUST BE PUT IN BOXES

CONTENTS: Circle if applicable ___ petris ___ gloves ___wipes ___ carcasses
Other Contents:_____
Approx. Weight:_____

Offline Processing Areas Orientation Briefing
Sharps Container Label

Sharps Container Label

IDENTIFICATION

DATE STARTED:_____
DATED LOGGED IN:_____

Experiment Name:_____
PI Name:_____
Room (OPA room number):_____Building: _____

DO NOT PUT ITEMS OTHER THAN SHARPS INSIDE

CONTENTS: Circle if applicable ___ needles ___blades ___ pipettes
Other Contents:_____

Offline Processing Areas Orientation Briefing

Vent Emission Utilization Form

FACILITY NAME:			AREA MANAGER:		
FACILITY NUMBER:			ROOM NUMBER/AREA:		
	DATE DA/MO/YR	CHEMICAL PRODUCT	QUANTITY USED PROVIDE UNITS	DURATION (HRS)	LAST NAME OF USER (PRINT)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
	NOTE: Chemical Product refers to either chemical or product name				
	NOTE: Duration refers to time period product actually used in fume hood				

Offline Processing Areas Orientation Briefing
Late Access and Launch Operations

- NASA Utilization or Spacehab personnel schedule all Late Access activities. Customer Integration Manager (CIM) will coordinate facility requirements to support turnover.

- Hardware turnover will generally occur in the customer's assigned Offline Processing Area.

- Personnel designated by the Payload Mission Manager may be present during experiment hardware turnover.

- A pre-turnover meeting will be scheduled 1-3 days prior to actual turnover in order to discuss open issues.

- Names of personnel required to accompany the payload to the orbiter must be submitted to the NASA Experiment Project Engineer one month prior to late access activities. List should be provided by the Payload Mission Manager.

Offline Processing Areas Orientation Briefing
Shipping Procedure - General

- **Definitions for the following procedure:**
  - Originator - Person(s) requesting shipment
  - Requestor - Person located at KSC coordinating shipment of originator
  - Shipping Organization - KSC contractor who performs shipping and packing duties

- **Shipping Procedure:**

I. Originator gives shipping information to requestor
   A. Address
      1. Company
      2. Street Address (Do Not Use P.O. Box)
      3. City
      4. State
      5. Zip Code
   B. Name and phone number of contact
   C. STS number, payload and experiment shipment support
   D. Inventory list including dollar value (U.S.)
      1. All equipment must be listed with identifying numbers (serial number, NEMS number, model number, etc.)
      2. All hazardous materials must be listed; PWQ's

Offline Processing Areas Orientation Briefing
Shipping Addresses

- **For Hardware, Large Packages & International Shipments**

  NASA Transportation
  PGOC Warehouse, Building M6-698
  Kennedy Space Center, Florida 32899
  (407) 867-7755/3504
  Mark for: Experimenter Name
  STS - Mission/Experiment Name
  and Phone number
  Deliver to: Customer's name
  Assigned Offline Processing Area Room Number
  Building Number
  Phone number of Customer

- **For Small Packages & Documentation:**

  NASA Transportation
  c/o Mission Scientist/Experimenter Name
  STS - Mission/Experiment Name
  Bldg. #
  Kennedy Space Center, Florida 32899

Offline Processing Areas Orientation Briefing
Phone Dialing Instructions

- **800 Numbers:** Dial 5 - 1 - 800 - Number
- **AT&T Operator:** Dial 5 - 1 - 800 - 225 - 5288
- **Between O&C and SSPF:** Dial 7 - Extension
- **Between KSC and CCAS:** Dial 5 - 853 - Extension
- **KSC Operator:** Dial 0
- **Local Call (Off Center):** Dial 5 - Number
- **Long Distance (Outside of U.S.):** Dial 0
- **Long Distance (Within U.S.):** Dial 8 - Area Code - Number

***NOTE: No collect calls.**

*** EMERGENCIES: Dial 9 - 1 - 1**

Offline Processing Areas Orientation Briefing
KSC Telephone Misuse and Abuse

The misuse and abuse of Government telephone equipment and services can be a cause for termination of employment. Recent personnel actions have shown this to be true and such misuse and abuse will not be tolerated by the Government or Contractors here at Kennedy Space Center.

Some cases of telephone abuse are:

- Bringing in personal laptop computers and unplugging telephones to use the lines to connect to Internet Gateways
- Unauthorized long distance personal calls on FTS (includes KSC, CCAS, other off Center locations and Government-issued telephone calling cards)
- Excessively long duration personal calls to local dialing area or toll free long distance numbers
- Using Government provided telephones to operate a business for personal gain from KSC
- Calls to radio or television station talk shows both inside and outside the local dialing area
- Willful damage to telephone equipment
- Personal calls on Government - provided cellular telephones

Offline Processing Areas Orientation Briefing
KSC Telephone Misuse and Abuse (cont'd)

THE FOLLOWING TYPES OF CALLS MAY BE PLACED ON GOVERNMENT - PROVIDED TELEPHONES:

- Official calls
- Emergency calls
- Authorized personal calls, including the following types of calls: 1) calls that do not adversely affect the performance of official duties by the employees or the employee's organization; 2) the calls are of reasonable duration and frequency; and 3) the calls could not reasonably have been made at another time.
- Certain personal long distance calls can be made at Government expense to locations within the local commuting area (such as to a spouse or dependents) providing they are of reasonable duration and frequency.
- ROUTINE REVIEWS OF OUTGOING TELEPHONE CALLS FROM KSC WILL CONTINUE. KSC EMPLOYEES WHO CONTINUE TO VIOLATE THE REGULATIONS CONCERING TELEPHONE USAGE WILL BE SUBJECT TO DISCIPLINARY ACTION. *FURTHER GUIDANCE ON THE PROPER USE OF GOVERNMENT TELEPHONES IS FOUND IN NMI2540.1C AND 41 CFR SUBPART 201-21.6.*

Offline Processing Areas Orientation Briefing
Computer Usage Information

- Any computer problems should be addressed to 867-ODIN.
- No software will be allowed to be copied from the Boeing/NASA personnel computers onto the customer computer for any reason. Such actions are considered as an act of software piracy and shall be dealt with legally.
- Exit out of modem links when **NOT** in use.
- Under no circumstances will there be any computer equipment movement without prior consent from the Computer Coordinator.
- Please be considerate; computer resources are shared. Allocate time and work activities, accordingly.

Offline Processing Areas Orientation Briefing
Computer Usage Information (cont'd)

- All computers having a "Leave On" sign should remain on at all times and should not be rebooted without permission from the Computer Coordinator.
- All computers designed for the payload will be provided with limited software. It is illegal to copy this software. All specific software must be provided by the customer.
- Please do not delete software from the hard drive.
- Computer virus control will be maintained by the Network Coordinator.

Offline Processing Areas Orientation Briefing
Customer Transient Office Space - General

Conference Room Scheduling

- Use of NASA conference rooms may be scheduled directly through the following web site: http://bullfrog.ksc.nasa.gov/cgi-bin/scheduler-main

Collect Calls

- It is against KSC regulations to accept collect calls. There are **NO** exceptions**!**

Food

- Please keep your area as clean as possible. Please clean up any spills at the coffee area and refrain from leaving food on desks. **Please dispose of all food related garbage in the designated trash barrels which are located in the hallways.**

Recycling

- Help us recycle by placing items in the correct receptacles. Aluminum cans should be placed in the designated boxes located in hallways. **White paper should be placed in the large blue trash barrels located in the hallways**.

Offline Processing Areas Orientation Briefing
Additional Support or Equipment Request

- Any request for support or equipment, not previously identified in the PRD, must be approved by the NASA Customer Integration Manager (CIM) or the Boeing Launch Site Support Engineer (LSSE).

- Requirement must be in writing indicating the due date and duration of support or equipment needed. Commodities must identify quantity and specific grade.

- If additional support is identified once you arrive at KSC, notify the following:

  – Technical Support - Notify NASA CPSM or Boeing OPAM

  – Commodities or Supplies - Notify the NASA CPSM or Boeing OPAM

  – Equipment - Notify the Boeing OPAM or the NASA CPSM

Offline Processing Areas Orientation Briefing
Equipment List

EQ DESC	MFG. NAME	MODEL #	VOLT RATING	RANGE/EQ LIMITS	ASSOCIATED EQ
ANALYZER, LOGIC	**HEWLETT-PACKARD**	**1650A**	**115/230v, 48/65Hz, 200W**		**ADAPTER**
BALANCE	METTLER INSTRU	1339F37	120v, 60Hz, 20a		ADAPTER
BALANCE, ANALYTICAL	A&D CO, LTD	FX200	120v, 60hZ, 14w		
BALANCE, ANALYTICAL	METTLER INSTRU	AE163	115/230v		
BENCH, HORIZONTAL CLEAN	NUAIRE INC	NU301-630	115v, 1phase, 60Hz	AIR FLOW> 70 - 110 ft./min.	
BENCH, LAMINAR FLOW	CLEAN ROOM PROD	C2006	115v, 60Hz, 1ph	Air Flow> minimum 72 ft./min.	
CENTERFUGE, BENCHTOP	INTERNATIONAL EQ	GP8R	120vAC, 60Hz, 15a	TEMP> -5 - 40 C SPD>500 - 6000rpm RCF>1 - 4630xg	ADAPTER
CLEANER, ULTRASONIC	BRANSON SONIC POWER	821OR-DTH	117v, 50/60Hz, 6.3a		
CLEANER, VACUUM	LAMINAIRE	GS81	115v; 7-8a		
DEIONIZER, WATER	BARNSTEAD	D4641	120v, 60Hz, 20a		
DISTILLER, WATER	CORNING GLASS WORKS	MP-3A	230v, 1PH, 3w		
FREEZER, -86 DEGREE	FORMA SCIENTIFIC	8523	230v, 50/60Hz, 12a	TEMP>(-50) -(-86)C	
GENERATOR, FUNCTION	WAVETEK SAN DIEGO,INC	166	120v		ADAPTER

Offline Processing Areas Orientation Briefing
Equipment List

EQ DESC	MFG. NAME	MODEL #	VOLT RATING	RANGE/EQ LIMITS	ASSOCIATED EQ
ICE MACHINE, CRUSHED	SCOTSMAN	MFE400AE1A	120 V		
ICE MAKING MACHINE, CUBES	ROSS-TEMP, INC	RC152SC	30a, 240/480/600vAC		
ILLUMINATOR, FIBER OPTIC	DOLAN-JENNER INDUST	A3200	115v, .3a		ADAPTER
INCUBATOR	LAB-LINE INSTRU	400			
INCUBATOR, CO2, AUTOFLOW WATER	NUAIRE INC	NU4500	117v, 15a	accuracy> +/- 0.2 @ 37C	
INCUBATOR, REFRIG.	PRECISION SCIENTIFIC	815	120v, 60Hz, 20a		
METER, PH	ORION RESEARCH, INC	720			
METER, PH / ION ANALYZER	ORION INSTRUMENT	620	120v, 60Hz, 1a	TEMP>-5 - 105 C pH>0 - 14.000	ADAPTER
METER, WATT, CLAMP ON	TIF	2000A	9v (battery)		
MICROSCOPE, ZOOM, STEREO	MEIJE TECHNOLOGY INC	EMZ-TR	120v, 60Hz, 20a		
MONITOR, TV	RADIO SHACK	16-230			
MULTIMETER	FLUKE	8060A	9v (battery)	VOLTS>0-1000vDC, 0-750vAC	

Offline Processing Areas Orientation Briefing
Equipment List

EQ DESC	MFG. NAME	MODEL #	VOLT RATING	RANGE/EQ LIMITS	ASSOCIATED EQ
OHMMETER, MICRO, DIGITAL RESISTANCE	KEITHLEY INSTRU	580	125v, 50/60Hz, 12vAC max	range>0-200kohm resist.>200mohm-2ohm=5ohm, 20 ohm-200kohm=1/2 of selected range	
OSCILLOSCOPE	TEKTRONIC	2465B	115v	limits configured by machine per input	ADAPTER
OSCILLOSCOPE	HEWLETT-PACKARD	54501A	115/230v 350vAC max 48/66Hz		ADAPTER
OVEN, ISOTEMP LAB	FISHER SCIENTIFIC	750G	120v, 50/60Hz	TEMP>50 - 275 C	
OVEN, ISOTEMP PROGRAMMABLE	FISHER SCIENTIFIC	851F	240v, 50/60Hz	TEMP>50-325 C	
OVEN, LAB	DESPATCH INDUST.	LDB1-24	120v, 60Hz, 11.6a		
POWER SUPPLY	KEPCO	JQE35-15M	115/230v, 50/60Hz, 10/5a	Max dc output> 36volts, 15amps	
POWER SUPPLY	HEWLETT-PACKARD	6038A	120v, 8a line fuses	VOLTS>0-60v AMPS>0 - 10a WATTS>0 - 200w	ADAPTER
POWER SUPPLY, 1.5 KVA, 3 PH	PACIFIC POWER SOURCE CORP	315-FR			
POWER SUPPLY, 1.5 KVA, 3 PH	PACIFIC POWER SOURCE CORP	110E-FT			
RECORDER, TEMPERATURE / HUMIDITY	DICKSON,CO	THDX 11-603-22	120vAC, 4 'D' battery	TEMP> -20 - 50 C DEW PT>-30 - 50 C HUM>0-95%RH	ADAPTER/ BATTERY
SCALE	A&D ENGINEERING	EP60KA	115v, 50/60Hz, 12VA	MAX 60 LBS; ACCURACY = 0.1 LBS	ADAPTER
SCALE, ANALYTICAL	A&D CO, LTD	HM300	120v, 50/60Hz, .3a	WEIGHT 0.01 - 310g, +/- 0.001g	ADAPTER

Offline Processing Areas Orientation Briefing
Equipment List (cont'd)

EQ DESC	MFG. NAME	MODEL #	VOLT RATING	RANGE/EQ LIMITS	ASSOCIATED EQ
SCALE, DIGITAL	OHAUS SCALE CORP	D20L		MAX 200 LBS; DD: 0 - 12.6 LBS = 0.2 LBS; 13 - 200 LBS = 0.5 LBS	
SCALE, ELECTRONIC	A&D CO, LTD	FP6000	12vDC	WEIGHT 0.01 - 310g, +/- 0.001g	ADAPTER
SCALE, ELECTRONIC, DIGITAL	OHAUS SCALE	DS20L		WGT> 220lbs	ADAPTER
SCALE, MECHANICAL PLATFORM	PELOUZE SCALE	3337SS			
SOLDERING STATION, DIGITAL	COOPER INDUS WELLER DIV	EC2002M	120v, 60Hz, 60w	Tip Temp range> 177-454C	
STERILIZER	NATIONAL INSTRU	704-9000D	115/120v, 60Hz, 1450w		
STERILIZER	AMERICAN STERILIZER	3023			
STERILIZER / DRYER, PORTABLE	YAMATO SCIENTIFIC CO, LTD	SM52	220v, 11a	TEMP>105 - 128 C PRESS>29 psi.max	
STIRRING HEAT PLATE	COLE / PALMER	03032-3	120V, 7.3a	TEMP>38-371C / 100-700F SPEED 50-1000 RPM	STIR STICK
THERMAL GUN, INFRAFED	WAHL INSTRU	DHS-8	9v (battery)	Temp>(-20) - 550C	
VACUUM CLEANER	NILFISK OF AMERICA	GS80			
WORK STATION/ FLOWBENCH	ATMOS-TECH INDUST.	562	120v, 60Hz, 3w		

Offline Processing Areas Orientation Briefing

Offline Processing Area Capabilities - O&C

LAB / LOCATION	Dimensions sq	Ceiling Height	Power Capabilit	UPS Capibility	Sinks	Fume Hoods	Laminar Flow Be	Chain Hoist	POL Locker	Refrigerator/Free	OIS D Box	Video
1277 Ante Room	156	11	*1	n/a	0	0	0	0	0	0	0	0
1277A	403	11	*1,	n/a	1	0	1	0	1	1	1	*4
1287 Ante room	129	9	*1,*2	n/a	0	0	0	0	0	0	0	0
1287A	318	9	*1	n/a	0	0	0	0	0	0	0	*4
1287B	331	9	*1	n/a	0	0	0	0	0	0	0	*4
1287C	266	9	*1,*2	n/a	0	0	0	0	0	0	0	*4
1287D	266	9	*1,*2	n/a	0	0	0	0	0	0	0	*4
1287E	257	9	*1,*2	n/a	0	0	0	0	0	0	0	*4
1287F	302	9	*1,*2	n/a	0	0	0	0	0	0	0	*4
1287G	337	9	*1,*2	n/a	1	0	1	0	1	2	0	*4
1292 Ante room	72	11	*1	n/a	0	0	0	0	0	0	0	0
1292A	114	11	*1	n/a	0	0	0	0	0	0	0	*4
1292B	129	11	*1	n/a	0	0	0	0	0	0	0	*4
1292C	132	11	*1	n/a	0	0	0	0	0	0	0	*4
1292D	115	11	*1	n/a	0	0	0	0	0	0	0	*4
1295	763	12	*1,*2	n/a	2	1	2	0	1	1	0	*4
1485 (Rack Room)		15	*1,*2	n/a	0	0	0	1	0	0	0	0

NOTES/Legend:	
*1	120V +/- 3% 1 phase & 3 phase
*2	208V +/- 3% 1 phase & 3 phase
*3	Temperature 4 degrees C +/- .5 maintained and remote monitored
*4	Available upon special request.
*5	Maintained at 71+/- 6 degrees F (21.7+/- 3.3 degrees C)
*6	Maintained at 300K but capable of 100K due to Hepa Filters

Offline Processing Areas Orientation Briefing

Offline Processing Area Capabilities - O&C (cont'd)

LAB / LOCATION	Dimensions sq.	Ceiling Height	Power Capabiliti	UPS Capibility	Sinks	Fume Hoods	Laminar Flow Be	Chain Hoist	POL Locker	Refrigerator/Free	OIS D Box	Video
2245 Ante room	2245	11	*1	n/a	0	0	0	0	0	0	0	0
2245A	192	11	*1	n/a	0	0	0	0	0	1	0	*4
2245B	189	11	*1,*2	n/a	0	0	0	0	0	0	0	*4
2245C (Dark room)	317	11	*1	n/a	2	0	0	0	1	0	0	*4
2249 Entry	86	11	*1	n/a	0	0	0	0	0	0	0	0
2249A (Cooler Ante rm	38	11	*1	n/a	0	0	0	0	0	0	0	0
2249B (Walk-in Cooler)	82	8	*1,*2	n/a	0	0	1	0	0	*3	0	0
2249C	350	11	*1,*2	n/a	1	0	0	0	0	1	0	*4
2249D	326	11	*1,*2	n/a	1	0	0	0	1	1	0	*4
2251	413	9	*1,*2	n/a	0	0	0	0	0	1	0	*4
2251A	393	9	*1,*2	n/a	0	0	0	0	0	0	0	*4

NOTES/Legend:	
*1	120V +/- 3% 1 phase & 3 phase
*2	208V +/- 3% 1 phase & 3 phase
*3	Temperature 4 degrees C +/- .5 maintained and remote monitored
*4	Available upon special request.
*5	Maintained at 71+/- 6 degrees F (21.7+/- 3.3 degrees C)
*6	Maintained at 300K but capable of 100K due to Hepa Filters

Offline Processing Areas Orientation Briefing

Offline Processing Area Capabilities - SSPF

LAB LOCATION	Dimentions/Sq Ft	Ceiling Height	120volts, 60Hz, 1phase, 20 amp	120volts, 60Hz, 1phase, 20 amp	208volts, 60Hz, 3phase, 30 amp	208volts, 60Hz, 3phase, 60 amp	480 volts, 60Hz, 3phase, 100 amp	Sinks hot and cold wa	FUME HOOD	POL Lockers	GN2 & GHE 50-750 P	Cranes	Vents High/Low Press	Compressed Air	Vacuum System	TCMS	OIS Box	CCTV	Admin & data Comm/ Multi U
1403 (Chem)	15x24	11'	7	4	4	2	0	1	ISOTOPE	1	N	1 ton	N	N	Y	N	N	N	Y
1405(Chem)	15x18	11'	8	2	2	2	0	1	CHEM	1	N	1 ton	N	N	Y	N	N	N	Y
1407A (Dark rm)	17x18	11'	10	2	2	2	0	1	VAPOR	1	N	1 ton	N	N	Y	N	N	N	Y
1407B (Dark rm)	20x19	11'	10	0	4	2	0	1	VAPOR	1	N	1 ton	N	N	Y	N	N	N	Y
1452	19x26	11'	26	0	2	3	0	1	N	1	N	1 ton	N	N	Y	N	N	N	Y
1456	19x24	11'	18	0	5	3	0	1	N	1	N	1 ton	N	N	Y	N	N	N	Y
1462	19x24	11'	18	0	6	3	0	1	N	1	N	1 ton	N	N	Y	N	N	N	Y
1465 *	19x20	11'	10	4	4	2	0	1	N	0	N	1 ton	Y	N	Y	N	N	N	Y
1473	19x20	11'	10	4	4	2	0	1	N	1	N	1 ton	Y	N	Y	N	N	N	Y
1477	19x20	11'	10	4	2	2	0	1	N	1	N	1 ton	Y	N	Y	N	N	N	Y
1481	19x21	11'	10	4	2	2	0	1	N	1	N	1 ton	Y	N	Y	Y	CONDUIT	Y	Y
1482	19x16	11'	10	2	2	2	0	1	N	1	N	1 ton	Y	N	Y	N	N	N	Y
1486	17x28	11'	18	0	7	3	0	1	N	1	N	1 ton	N	N	Y	N	N	N	Y
1487	16x23	11'	8	4	2	2	0	1	N	1	N	1 ton	Y	N	Y	Y	CONDUIT	Y	Y
1488	14x28	11'	10	2	4	2	0	1	N	1	N	1 ton	Y	N	Y	N	N	N	Y
1495 **	39x25	15'	18	0	6	3	1	1	N	1	Y	2 ton	Y	Y	Y	Y	CONDUIT	Y	Y
1496 **	23x25	15'	12	2	4	2	1	1	N	1	N	2 ton	Y	Y	Y	N	N	N	Y

* Direct access to the intermediate bay

** Direct access to the high bay

Offline Processing Areas Orientation Briefing

Guidelines for Contamination Control in Clean Work Areas(CWA)

OPERATION	LIMITATIONS / RESTRICTIONS	CONTAMINATION CONTROL PROCEDURES
MINOR SANDING	TOTAL AREA LESS THAN 16 SQUARE INCHES. HAND SANDING ONLY.	WET SAND WHEN POSSIBLE. VACUUM PARTICULATE MATTER AS IT IS GENERATED. CLEAN SURROUNDING AREA DURING AND AFTER OPERATION. MINIMIZE PERSONNEL IN IMMEDIATE AREA.
****MAJOR SANDING**	TOTAL AREA GREATER THAN 16 SQUARE INCHES OR POWER SANDING.	IN ADDITION TO MEASURES FOR MINOR SANDING, PROTECTIVE TENT REQUIRED AROUND OPERATION. POWER SANDING STRONGLY DISCOURAGED.
MINOR GRINDING	TOTAL AREA LESS THAN 16 SQUARE INCHES. HAND FILING / GRINDING ONLY.	VACUUM PARTICULATE MATTER AS IT IS GENERATED. CLEAN SURROUNDING AREA DURING AND AFTER OPERATION. MINIMIZE PERSONNEL IN IMMEDIATE AREA.
****MAJOR GRINDING**	TOTAL AREA GREATER THAN 16 SQUARE INCHES OR POWER GRINDING. POWER GRINDING REQUIRES BURN PERMIT.	IN ADDITION TO MEASURES FOR MINOR GRINDING, PROTECTIVE TENT REQUIRED AROUND OPERATION. POWER GRINDING STRONGLY DISCOURAGED.
MINOR SAWING	SAW LINE LESS THAN 8 INCHES. HAND SAWING ONLY.	VACUUM PARTICULATE MATTER AS IT IS GENERATED. CLEAN SURROUNDING AREA DURING AND AFTER OPERATION. MINIMIZE PERSONNEL IN IMMEDIATE AREA.
****MAJOR SAWING**	SAW LINE GREATER THAN 8 INCHES OR POWER SAWING.	IN ADDITION TO MEASURES FOR MINOR SAWING, PROTECTIVE TENT REQUIRED AROUND OPERATION. POWER SAWING STRONGLY DISCOURAGED.
****DRILLING**	LOW SPEED ONLY. MINIMIZE USE OF CUTTING OILS.	VACUUM PARTICULATE MATTER AS IT IS GENERATED. CLEAN SURROUNDING AREA DURING AND AFTER OPERATION. MINIMIZE PERSONNEL IN IMMEDIATE AREA.
MINOR PAINT REMOVING - MECHANICAL -	TOTAL AREA LESS THAN 16 SQUARE INCHES. HAND SANDING ONLY.	USE MINOR SANDING PROCEDURE.

Offline Processing Areas Orientation Briefing

Guidelines for Contamination Control in CWA (cont'd)

OPERATION	LIMITATIONS / RESTRICTIONS	CONTAMINATION CONTROL PROCEDURES
****MINOR PAINT REMOVING - CHEMICAL -**	TOTAL AREA LESS THAN 4 SQUARE INCHES. CHEMICAL STRIPPER MUST BE APPROVED BY PGOC M&P ENGINEERING.	PREPARE STRIPPER OUTSIDE OF CWA. MINIMIZE AMOUNT OF STRIPPER BROUGHT INTO CWA - 2 FL OZ MAXIMUM. UTILIZE PORTABLE HEPA FILTERED EXHAUST UNIT TO CAPTURE SOLVENT FUMES WHILE PAINTING.
MAJOR PAINT REMOVING	TOTAL AREA GREATER THAN 16 SQUARE INCHES. GENERALLY NOT ALLOWED IN CWA.	
TOUCH-UP PAINTING	TOTAL AREA LESS THAN 16 SQUARE INCHES. BRUSH PAINTING ONLY - NO SPRAY PAINTING.	MIX / STIR PAINT OUTSIDE OF CWA. MINIMIZE AMOUNT OF PAINT BROUGHT INTO CWA - 2 FL OZ MAXIMUM. UTILIZE PORTABLE HEPA FILTERED EXHAUST TO CAPTURE PAINT FUMES WHILE PAINTING.
****MAJOR PAINTING**	TOTAL AREA GREATER THAN 16 SQUARE INCHES. BRUSH PAINTING ONLY - NO SPRAY PAINTING.	MIX / STIR PAINT OUTSIDE OF CWA. MINIMIZE AMOUNT OF PAINT BROUGHT INTO CWA - 4 FL OZ (PER CONTAINER) MAXIMUM. PROTECTIVE TENT MUST ENCLOSE OPERATION. FUMES INSIDE TENT MUST BE EXHAUSTED OUTSIDE OF CWA. MAJOR PAINTING STRONGLY DISCOURAGED.
****SOLDERING**	BURN PERMIT REQUIRED. LIMITED TO MINOR REPAIR / ASSEMBLY WORK.	UTILIZE PORTABLE HEPA FILTERED EXHAUST UNIT OR FACILITY VACUUM SYSTEM TO CAPTURE SOLDER SMOKE. EXTENSIVE SOLDERING WILL REQUIRE A PROTECTIVE TENT TO ENCLOSE AND EXHAUST THE SMOKE.
****WELDING, CUTTING, BRAZING**	GENERALLY NOT ALLOWED IN CWA.	

CONTACT OPERATIONS ENGINEERING, FACILITY MANAGEMENT OR THE CCE PRIOR TO PERFORMING ANY POTENTIAL CONTAMINATION GENERATING OPERATION.

THE PROCEDURES WITHIN THIS GUIDE ARE TO BE CONSIDERED MINIMUM REQUIREMENTS. MORE STRINGENT REQUIREMENTS MAY BE IMPOSED BY FACILITY MANAGEMENT, THE CCE, AND/OR OTHER AFFECTED PARTIES.

** ASTERISKS DENOTE OPERATIONS REQUIRING PRE-APPROVAL BY OTHER AFFECTED PARTIES. CONTACT OPERATIONS ENGINEERING, FACILITY MANAGEMENT OR THE CCE TO ARRANGE FOR APPROVAL.

NOTE: WORK REQUIRING AN OPEN FLAME MUST BE COORDINATED WITH THE FIRE INSPECTOR FOR APPROVAL AND OR A BURN PERMIT.